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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,737	10/19/2001	Richard M. Knox	5405-248CX2DV	3284

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EXAMINER

PARKER, KENNETH

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 07/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,737

Applicant(s)

KNOX ET AL.

Examiner

Kenneth A Parker

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. **Claims 24, 27-28 are rejected under 35 U.S.C. 102(e) as being by anticipated by Mitsutake et al, US Patent # 5,568,283.**

Mitsutake et al discloses a device with dual quarter wave ferroelectric liquid crystal cells, and therefore appears to be the same as applicant's and therefore should have the same properties (see figures 2a and 2b, description in column 5, lines 10-42). DC balancing is not disclosed, however DC balancing is appears to be only an intended use limitation, and as such is considered met by Mitsutake et al

Claims 24, 27-28 are rejected under 35 U.S.C. 102(e) as being by anticipated by Kaneko et al, US Patent # 5,615,025.

Kaneko et al discloses a liquid crystal device with dual quarter wave ferroelectric liquid crystal cells, and therefore appears to be the same as applicant's and therefore should have the same properties (see figures 2a and 2b, description in column 5, lines 10-42). DC balancing is not disclosed, however DC balancing is appears to be only an intended use limitation, and as such is considered met by Kaneko et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al, US Patent # 5,615,025 in view of Barnik 5295009 and Funfschilling et al 5319478.

Lacking from the disclosure is the polarizer being reflective. Reflective polarizers were well known to enable projection optics to be employed in a compact and low cost manner with light recycling, and therefore would have been obvious to one of ordinary skill to to use for light recycling for these benefits. Barnik et al and Funfschilling evidences the well known, with Funfschilling giving the teaching in col 3, lines 20-48.

4. Claim 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsutake et al, US Patent # 5,568,283 in view of Barnik 5295009 and Funfschilling et al 5319478.

Lacking from the disclosure is the polarizer being reflective. Reflective polarizers were well known to enable projection optics to be employed in a compact and low cost manner with light recycling, and therefore would have been obvious to one of ordinary skill to to use for light recycling for these benefits. Barnik et al and Funfschilling evidences the well known, with Funfschilling giving the teaching in col 3, lines 20-48.

Lacking from the disclosure is the polarizer being reflective. Reflective polarizers were well known to enable projection optics to be employed in a compact and low cost manner, and therefore would have been obvious to use.

Information Disclosure Statement

The information disclosure statement filed 10/16/01 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The references C17, 18 and 20 were not found and therefore not considered.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Many, many other references currently of record read on the claimed structures, as many devices employ a retarder and an LCD waveplate stack with a reflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 703-305-6202. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

Kenneth A Parker
Primary Examiner
Art Unit 2871

July 14, 2003